

palet, 3-nerved, hispid on the keel, otherwise slightly scabrous, acute; lower palet linear lanceolate, slightly compressed, rather indistinctly 5-nerved, acute, but not awned, minutely scabrous, somewhat scariosus and bronzed at the tip. Oregon.

This has some resemblance to *Festuca pratensis*, but has a denser panicle, with more numerous branches, and is not nodding but erect. The glumes are also longer, and the palets blunter and thinner. It approaches the section *Atropis* of *Poa*, which seems to connect *Poa* and *Festuca*.—GEO. VASEY.

MORE ABOUT BALLAST PLANTS.—A few days ago I paid my first visit of the season to the ballast ground near Philadelphia; some matters of interest were observed, of which I am prompted to make mention. Since the publication of my article some months ago on these new comers, I have received many letters of inquiry, as to certain plants herein mentioned, and have had a demand for specimens far beyond my ability to furnish, showing a developing interest in the matter of introduction and distribution of species.

Some plants that were very abundant last year I could find no trace of, but others in their stead of equal beauty and interest. In the following list will be noticed many species that are occasionally met with in waste grounds around cities and often in neglected country places, but it is probable that the specimens collected were from imported seeds:

Ranunculus bulbosus, L., and *R. repens*, L., both quite abundant; the former presents no variation from its usual condition, but the latter is the typical form: prostrate, very hairy, and sending out long runners, exhibiting the same characters as specimens from Europe now in my herbarium. There is, however, a plant growing along the shores of the Delaware River near Philadelphia, that I have been familiar with for the last twenty years, and have never seen it produce a runner of any kind, or show any disposition that way. It is upright in habit, often very smooth, with leaves three times the size of those on the ballast plant. Prof. Gray, to whom I sent a specimen last year, writes me, that it is one of the many forms he has had to refer to *R. repens*, L. When I have examined some of our *Compositæ* and been sorely puzzled to know what species they were on account of their close resemblance one to another, and have remembered this *Ranunculus* with its many variations, and so strikingly different in habit, appearance, &c., I have asked myself the question, what is a species, and what are characters on which species and varieties are based?

Erysimum cheiranthoides, Br., has sparingly occurred in former years, but I found only one specimen.

Three species of *Diplotaxis* are quite common, *muralis*, Boiss., *monensis*, Hudson, and *tenuifolia*, Boiss. The last seems to be fast gaining a foothold.

Thlaspi arvense, L., one specimen collected. It has occasionally been found in former years.

Camelina sativa, Crantz, is quite plentiful, some of the specimens more than two feet in height. This species occurs frequently in grain fields and on roadsides, but usually not of such luxuriant growth.

Lepidium ruderale, L., is very abundant. Two specimens of *Lepidium campestre*, L., were collected. I have seen this occasionally on roadsides in the vicinity of Philadelphia, but it is rarely met with.

Scabieria coronopus, DC., and *S. didyma*, Pers., are both abundant.

Sisymbrium Sophia, L., not so plentiful as in former years.

Roseda luteola, L., is becoming quite common.

Silene inflata, Sm., and *S. noctiflora*, L., are as abundant as I have ever seen them.

Silene dichotoma, Ehrh., one plant only was seen. This is the first time it has been found here.

Lychnis vespertina, Sibth., and *L. diurna*, Sibth., are quite common again this year. *Potentilla reptans*, L., and *P. anserina*, L., are both abundant. The former seems more inclined to produce flowers than in former years.

Poterium sanguisorba, L., a single specimen was collected. It has not been detected on the ballast deposits before.

Trifolium hybridum, L., has not yet appeared. It was quite abundant last year and in one locality seemed likely to become established, but the "March of Improvement," has eradicated it entirely from that spot.

Vicia Cracca, L., but a single specimen was found. It being so showy in flower it will scarcely survive the season, as "the boys" carry off most of the attractive plants.

Centaurea Cyanus, L., is quite common again.

Carduus pycnocephalus, Jacq., a single specimen appeared last year for the first time, now thirty or forty plants are growing in a space not more than fifteen feet square.

Anthemis nobilis, L., only one specimen collected; a plant was growing near the same locality last fall but it did not flower.

Veronica hederifolia, L., and *V. Barbaunii*, Tenore, are both in flower, but are not plentiful.

Echinochloa Lappula, Lehm., is just coming into flower, was quite abundant last year.

Echinochloa Redoukii, Lehm., is growing very luxuriantly on the railroad embankment. This according to Gray's Manual occurs on the Western plains and at St. Paul, Minnesota. The single marginal row of stout prickles on the nutlets is well marked, and it seems to flower much earlier than the other species.

Myosotis arvensis, Hoff., is growing in a few places.

Asperugo procumbens, L., one specimen only. This was first detected by Isaac Burk, of Philadelphia, about two weeks ago.

Linaria spuria, Dest., will be abundant again this year.

Carex hirta, L., is growing quite luxuriantly, and if not molested will firmly establish itself; the creeping roots are spreading rapidly in all directions.

Alopecurus agrestis, L., was collected in two localities. I found but one specimen of it last year.

On a lot of new ballast was growing *Godetia quadrivalvata*, Spach., and *Gilia capitata*, Douglass, both Western species. I am puzzled to know how they got here, unless some ballast from California has been deposited, which I have not been able to ascertain. Some half dozen species of each were collected.

This transportation of seeds and consequent introduction of new plants, as I have repeatedly remarked, is an interesting matter for consideration, and as I review these ballast deposits, and detect so many strangers, I feel a re-awakening of that interest which a ramble about our fields and woodlands fails to create.—ISAAC C. MARTINDALE, Camden, N. J.

NOTES ON WINTER FLORA OF FLORIDA.—Christmas day, 1876, found myself and family in the much praised, over-rated town of Jacksonville. From Savannah we had been accompanied by constant rains, thus giving me little opportunity to dodge out at the stations and secure specimens of Natural History in any department. In that Mecca of Northern travel, Jacksonville, I saw but little of interest to a naturalist in the way of Botany. The Live Oaks and the *Tillandsia* which shrouds them serve to render the town more pleasant than it would otherwise be. The Mistletoe seems to be playing havoc with many of the trees. At this season I did not expect to obtain very many flowers in bloom, and a recent frost had destroyed many species, natural and cultivated. Having therefore looked over the city so far as we could in the midst of a constant drizzle of rain, we prepared to leave for a more favored section. St. Augustine